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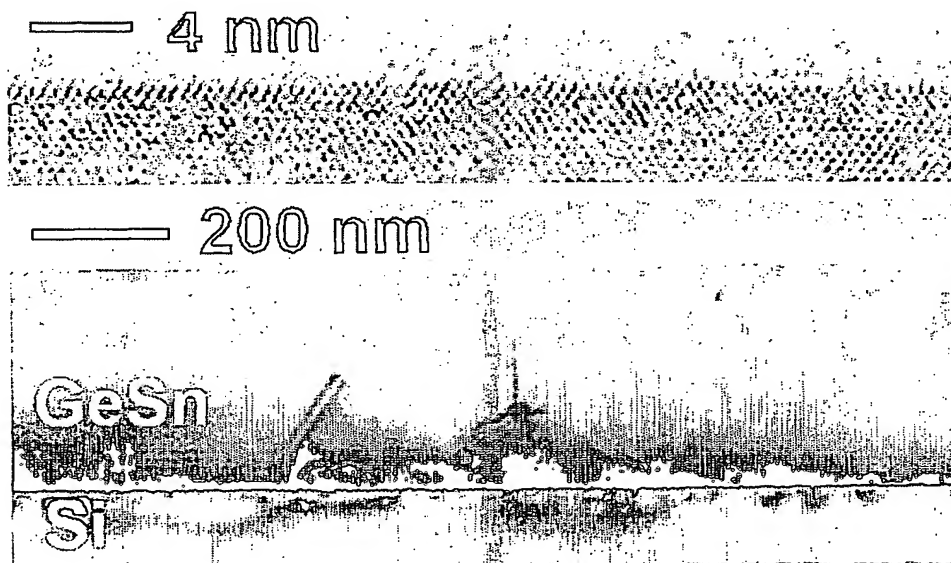
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60/478,480 13 June 2003 (13.06.2003) US</p> <p>(71) Applicant (for all designated States except US): ARIZONA BOARD OF REGENTS, acting for and on behalf of ARIZONA STATE UNIVERSITY [US/US]; Brickyard, Suite 601, Room 691AA, 699 S. Mill Ave, Tempe, AZ 85281 (US).</p> <p>(72) Inventors; and</p> <p>(75) Inventors/Applicants (for US only): KOUVETAKIS, John [US/US]; 7032 E. Indigo, Mesa, AZ 85207 (US). BAUER, Matthew [US/US]; 996 E. Rice Drive, Tempe, AZ 85283 (US). MENENDEZ, Jose [US/US]; 309 E.</p> | <p>H01L</p> <p>14th Street, Tempe, AZ 85281 (US). HU, Chang, Wu [CN/US]; 1688 W Encinas Street, Gilbert, AZ 85233 (US). TSONG, Ignatius, S., T. [US/US]; 1445 E. Palomino Drive, Tempe, AZ 85284 (US). TOLLE, John [US/US]; 1489 S. Dove Street, Gilbert, AZ 85233 (US).</p> <p>(74) Agent: ONEX, Richard, E.; Fennemore Craig, 3003 North Central, Suite 2600, Phoenix, AZ 85012-2913 (US).</p> <p>(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.</p> <p>(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,</p> |
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(54) Title: GESN ALLOYS AND ORDERED PHASES WITH DIRECT TUNABLE BANDGAPS GROWN DIRECTLY ON SILICON



(57) Abstract: A method for depositing an epitaxial Ge-Sn layer on a substrate in a CVD reaction chamber includes introducing into the chamber a gaseous precursor comprising SnD4 under conditions whereby the epitaxial Ge-Sn layer is formed on the substrate. the gaseous precursor comprises SnD4 and high purity H2 of about 15-20 % by volume. The gaseous precursor is introduced at a temperature in a range of about 250 °C to about 350 °C. Using the process device-quality Sn-Ge materials with tunable bandgaps can be grown directly on Si substrates.

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- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA,

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- of inventorship (Rule 4.17(iv)) for US only

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